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Generate:	<input type="radio"/> Hit List	<input type="radio"/> Hit Count	<input type="radio"/> Side by Side	<input type="radio"/> Image
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Search History

DATE: Wednesday, June 22, 2005 [Printable Copy](#) [Create Case](#)

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		result	set
side by side			
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
<u>L21</u>	(4953085 4722055 4744027 4744026 5148365 4346442 4642768 5101353 4674044 4694397 4752877 4797839 4744028)![PN]	25	<u>L21</u>
<u>L20</u>	('5799287' '5148365')[PN]	4	<u>L20</u>
<u>L19</u>	('5799287' '5148365')[URPN]	72	<u>L19</u>
<u>L18</u>	"dembo, ron".in.	8	<u>L18</u>
<u>L17</u>	L16 and 705/36	46	<u>L17</u>
<u>L16</u>	L15 and value	122	<u>L16</u>
<u>L15</u>	L12 and future	136	<u>L15</u>
<u>L14</u>	L12 and value	164	<u>L14</u>
<u>L13</u>	L12 and disaggregat\$	2	<u>L13</u>
<u>L12</u>	(portfolio with scenarios or portfolio near scenarios)	192	<u>L12</u>
<u>L11</u>	L10 and value	73	<u>L11</u>
<u>L10</u>	L9 and future	73	<u>L10</u>
<u>L9</u>	L8 and disaggregat\$	80	<u>L9</u>
<u>L8</u>	L7 and value	3981	<u>L8</u>
<u>L7</u>	portfolio	6636	<u>L7</u>
<u>L6</u>	L5 and disaggregat\$	5	<u>L6</u>
<u>L5</u>	optimal near portfolio	98	<u>L5</u>

L4 705.clas.
L3 705/38
L2 705/36
L1 705/35

34660 L4
876 L3
1247 L2
2087 L1

END OF SEARCH HISTORY



US006799167B1

(12) **United States Patent**
Gullen et al.(10) Patent No.: **US 6,799,167 B1**
(45) Date of Patent: **Sep. 28, 2004**(54) **DYNAMIC PORTFOLIO BENCHMARKING**(75) Inventors: **David Gullen**, San Francisco, CA (US); **Lee Epstein**, San Francisco, CA (US); **Christopher Stoddart**, Woodside, CA (US)(73) Assignee: **Decision Analytics, Inc.**, San Francisco, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/425,128**(22) Filed: **Oct. 22, 1999**(51) Int. Cl. ⁷ **G06F 17/60**(52) U.S. Cl. **705/36; 705/35**(58) Field of Search **705/36, 35**(56) **References Cited**

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Dahlquist et al., "Evaluating portfolio performance with stochastic discount factors", The Journal of Business; Chicago; Jul. 1999.*

Zargham et al., "A Web-based information system for stock evaluation", Advance Issues of E-Commerce and Web-Based Information Systems, WECWIS, 1999, International Conference on Apr. 8-9, 1999, Santa Clara, CA, pp. 81-83.*

(List continued on next page.)

Primary Examiner—Jeffrey A. Smith

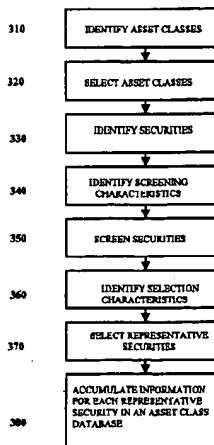
Assistant Examiner—Y. C. Garg

(74) Attorney, Agent, or Firm—Donald J. Lenkszus

(57) **ABSTRACT**

A benchmark portfolio is provided to be customizable to an investment portfolio where the customization is dynamic. Each customization can be recorded as a historical event, and the investment return of the benchmark portfolio is based on the recorded customizations. The benchmark portfolio includes select asset classes, which include a sweep account, where each asset class includes at least one security that is representative of a set of specifically screened securities within the asset class.

27 Claims, 7 Drawing Sheets



Shawn X



US006078905A

United States Patent [19]

Pich-LeWinter

[11] **Patent Number:** 6,078,905[45] **Date of Patent:** Jun. 20, 2000[54] **METHOD FOR OPTIMIZING RISK MANAGEMENT**

[76] Inventor: Eva Pich-LeWinter, 81900 Mountain View La., La Quinta, Calif. 92253

[21] Appl. No.: 09/049,690

[22] Filed: Mar. 27, 1998

[51] Int. Cl.⁷ G06F 17/60

[52] U.S. Cl. 705/36; 705/35; 705/38

[58] Field of Search 705/35, 36, 38

[56] **References Cited**

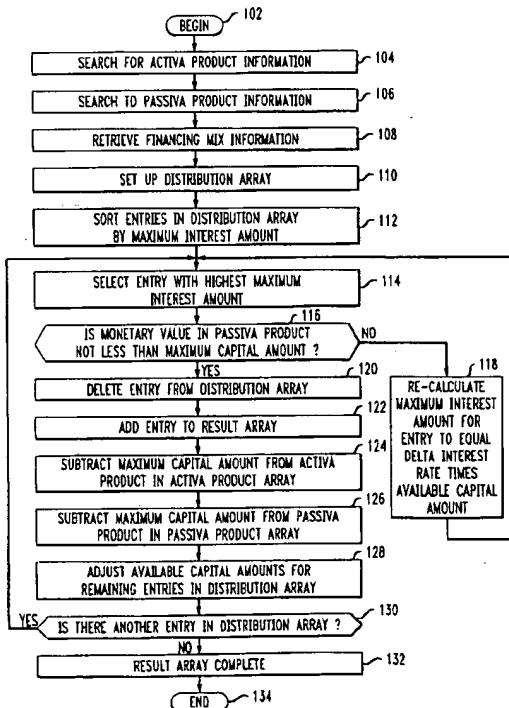
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9 Claims, 4 Drawing Sheets



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L18: Entry 6 of 8

File: USPT

Sep 15, 1992

US-PAT-NO: 5148365

DOCUMENT-IDENTIFIER: US 5148365 A

TITLE: Scenario optimization

DATE-ISSUED: September 15, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Dembo; Ron S.</u>	Toronto, Ontario			CA

APPL-NO: 07/ 394081 [PALM]

DATE FILED: August 15, 1989

INT-CL: [05] G06F 15/20

US-CL-ISSUED: 364/402; 364/408

US-CL-CURRENT: 705/36R

FIELD-OF-SEARCH: 364/402, 364/401, 364/408

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<input type="checkbox"/> <u>4642768</u>	February 1987	Roberts	
<input type="checkbox"/> <u>4674044</u>	June 1987	Kalmus et al.	
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<input type="checkbox"/> <u>4797839</u>	January 1989	Powell	364/554
<input type="checkbox"/> <u>4953085</u>	August 1990	Atkins	364/408

ART-UNIT: 236

PRIMARY-EXAMINER: Smith; Jerry

ASSISTANT-EXAMINER: Trammell; Jim

ATTY-AGENT-FIRM: Spencer, Frank & Schneider

ABSTRACT:

A method and apparatus are provided for optimally allocating available resources in a physical system defined by a mathematical model having parameters of uncertain values. The method comprises the steps of firstly assigning a value to each of the uncertain parameters in the mathematical model based on a scenario that may or is expected to occur. Thereafter, given the parameter values at each possible scenario, the mathematical model is solved to yield the best solution of the mathematical model for that scenario. Once this has been complete, a probability value representing the expected probability that the scenario will occur is assigned to each scenario solution. The scenario parameter values, scenario solutions and scenario probabilities are then used to determine a single solution to the mathematical model which best "fits" the desired system behavior under the uncertainty defined by all of the scenarios considered. The single solution is then used to allocate the resources in the system. The present method is particularly useful in modelling a target portfolio from a number of other financial instruments.

18 Claims, 10 Drawing figures

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L18: Entry 5 of 8

File: USPT

Aug 25, 1998

US-PAT-NO: 5799287

DOCUMENT-IDENTIFIER: US 5799287 A

TITLE: Method and apparatus for optimal portfolio replication

DATE-ISSUED: August 25, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Dembo; Ron S.</u>	Toronto, Ontario			CA

APPL-NO: 08/ 866303 [PALM]

DATE FILED: May 30, 1997

PARENT-CASE:

This is a continuation of application Ser. No. 08/248,042, filed May 24, 1994, now abandoned.

INT-CL: [06] G06 F 157/00

US-CL-ISSUED: 705/36

US-CL-CURRENT: 705/36R

FIELD-OF-SEARCH: 705/36, 705/37, 705/35, 395/925

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4346442</u>	August 1982	Musmanno	364/408
<u>4642768</u>	February 1987	Roberts	364/408
<u>4674044</u>	June 1987	Kalmus et al.	364/408
<u>4694397</u>	September 1987	Grant et al.	364/408
<u>4722055</u>	January 1988	Roberts	364/408
<u>4744026</u>	May 1988	Vanderbei	364/402
<u>4744027</u>	May 1988	Bayer et al.	364/402
<u>4744028</u>	May 1988	Karmarkar	364/402
<u>4752877</u>	June 1988	Roberts et al.	364/408
<u>4797839</u>	January 1989	Powell	364/554
<u>4953085</u>	August 1990	Atkins	364/408

<input type="checkbox"/>	<u>5101353</u>	March 1992	Lupien et al.	705/37
<input type="checkbox"/>	<u>5148365</u>	September 1992	Dembo	364/402

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ART-UNIT: 274

PRIMARY-EXAMINER: McElheny, Jr.; Donald E.

ATTY-AGENT-FIRM: Kenyon & Kenyon

ABSTRACT:

A method and apparatus for determining an optimal replicating portfolio for a given target portfolio involves an initial step wherein a user defines a target portfolio to be replicated, a set of available market instruments from which the replicating portfolio may be created, a set of future scenarios, a horizon date, and a minimum profit to be attained. A representation of the trade-off between risk and expected profit for some arbitrary replicating portfolio is then determined and used to calculate a maximum risk-adjusted profit. The maximum risk-adjusted profit reflects that level of return that may be achieved with an optimum degree of risk; that is, it reflects that point in the risk/reward trade-off where a marginal cost of risk is equivalent to a marginal benefit attainable by assuming that risk. The method then uses the predefined set of available market instruments to identify a set of transactions that will create a replicating portfolio that will achieve the maximum risk-adjusted profit. The method and apparatus also derives the information required to compute a risk premium for pricing of portfolios in incomplete markets, and performs the computation.

12 Claims, 8 Drawing figures

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Search Results - Record(s) 1 through 8 of 8 returned.

1. Document ID: US 20010028369 A1

L18: Entry 1 of 8

File: PGPB

Oct 11, 2001

PGPUB-DOCUMENT-NUMBER: 20010028369

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010028369 A1

TITLE: Three dimensional spatial user interface

PUBLICATION-DATE: October 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gallo, Anthony Carmen	Toronto		CA	
Graham, Colin Eric	Toronto		CA	
<u>Dembo, Ron</u>	Toronto		CA	
Talbot, Jimmy Daniel	Toronto		CA	
Gallagher, Peter James	Toronto		CA	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
VIZIBLE.COM INC.				03

APPL-NO: 09/ 809330 [PALM]

DATE FILED: March 16, 2001

RELATED-US-APPL-DATA:

Application 09/809330 is a continuation-in-part-of US application 09/527917, filed March 17, 2000, PENDING

Application is a non-provisional-of-provisional application 60/266471, filed February 6, 2001,

INT-CL: [07] G06 F 3/00

US-CL-PUBLISHED: 345/848; 345/850

US-CL-CURRENT: 715/848

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A method and system of providing a three dimensional spatial user interface (SUI) to a user of a computing device. The SUI may be manipulated in three dimensions and contains a plurality of portals. A portal may contain a sensory cue that provides a reminder as to the content of the portal. Upon selection of a portal, an application program associated with the cue in the portal is invoked. Portals may also contain further instances of the SUI of the present invention, thus providing hierarchical depth. In the preferred

embodiment, the SUI is implemented as a sphere and may be viewed from an external or internal perspective.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMD](#) | [Drawn Desc](#) | [Ima](#)

2. Document ID: US 20010011243 A1

L18: Entry 2 of 8

File: PGPB

Aug 2, 2001

PGPUB-DOCUMENT-NUMBER: 20010011243

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010011243 A1

TITLE: Risk management system, distributed framework and method

PUBLICATION-DATE: August 2, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
<u>Dembo, Ron</u>	Toronto		CA	
Adar, Alon	Toronto		CA	
Bartlett, Neil Edward	Toronto		CA	
Parkinson, Brian	Toronto		CA	
Perry, David	Toronto		CA	
Zerbs, Michael	Markham		CA	

APPL-NO: 09/ 811684 [PALM]

DATE FILED: March 20, 2001

RELATED-US-APPL-DATA:

Application 09/811684 is a continuation-of US application 09/323680, filed June 2, 1999, PENDING

INT-CL: [07] G06 F 17/60

US-CL-PUBLISHED: 705/36

US-CL-CURRENT: 705/36R

REPRESENTATIVE-FIGURES: 6

ABSTRACT:

A risk management system and method of determining a risk metric for a portfolio of instruments is provided. The system and method include a database wherein determined risk values for instruments in a set of instruments under each scenario can be maintained. At least one risk engine can be employed to determine values for the instruments and at least one aggregation engine can be employed to produce desired risk metrics for the set of instruments or a subset thereof. Each risk engine and each aggregation engine is connected to the database by an appropriate network.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMD](#) | [Drawn Desc](#) | [Ima](#)

3. Document ID: US 6636246 B1

L18: Entry 3 of 8

File: USPT

Oct 21, 2003

US-PAT-NO: 6636246

DOCUMENT-IDENTIFIER: US 6636246 B1

** See image for Certificate of Correction **

TITLE: Three dimensional spatial user interface

DATE-ISSUED: October 21, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gallo; Anthony Carmen	Toronto			CA
Graham; Colin E.	Toronto			CA
<u>Dembo; Ron</u>	Toronto			CA
Talbot; Jimmy D.	Toronto			CA
Gallagher; Peter J.	Toronto			CA

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Vizable.com Inc.	Toronto			CA	03

APPL-NO: 09/ 527917 [PALM]

DATE FILED: March 17, 2000

INT-CL: [07] G06 F 3/00

US-CL-ISSUED: 345/805; 345/850, 345/746

US-CL-CURRENT: 715/805; 715/746, 715/850

FIELD-OF-SEARCH: 345/805, 345/782, 345/742, 345/743, 345/748-749, 345/803-804, 345/848-855, 345/653, 345/836, 345/441, 345/676-680, 345/744-747, 345/757

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5148154</u>	September 1992	MacKay et al.	
<u>5303388</u>	April 1994	Kreitman et al.	
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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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ART-UNIT: 2174

PRIMARY-EXAMINER: Sax; Steven

ATTY-AGENT-FIRM: Bereskin & Parr

ABSTRACT:

A method and system of providing a three dimensional spatial user interface (SUI) to a user of a computing device. The SUI may be manipulated in three dimensions and contains a plurality of portals. A portal may contain a sensory cue that provides a reminder as to the content of the portal. Upon selection of a portal, an application program associated with the cue in the portal is invoked. Portals may also contain further instances of the SUI of the present invention, thus providing hierarchical depth. In the preferred embodiment, the SUI is implemented as a sphere and may be viewed from an external or internal perspective.

23 Claims, 11 Drawing figures

Full Title Citation Front Review Classification Date Reference Claims KMC Draw Desc Images

4. Document ID: US 6278981 B1

L18: Entry 4 of 8

File: USPT

Aug 21, 2001

US-PAT-NO: 6278981

DOCUMENT-IDENTIFIER: US 6278981 B1

TITLE: Computer-implemented method and apparatus for portfolio compression

DATE-ISSUED: August 21, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dembo; Ron Samuel	Ontario			CA
Kreinin; Alexander Yacov	Thornhill			CA
Rosen; Dan	Toronto			CA

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Algorithmics International Corporation	Ontario			CA	03

APPL-NO: 09/ 084923 [PALM]

DATE FILED: May 28, 1998

PARENT-CASE:

This application claims priority to Provisional Application No. 60/057,927, filed May 29, 1997.

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/36

US-CL-CURRENT: 705/36R

FIELD-OF-SEARCH: 705/36, 705/37

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4346442</u>	August 1982	Musmanno	364/408
<u>4642768</u>	February 1987	Roberts	364/408
<u>4674044</u>	June 1987	Kalmus et al.	364/408
<u>4694397</u>	September 1987	Grant et al.	364/408
<u>4722055</u>	January 1988	Roberts	364/408
<u>4744026</u>	May 1988	Vanderbei	364/402
<u>4744027</u>	May 1988	Bayer et al.	364/402
<u>4744028</u>	May 1988	Karmarkar	364/402
<u>4752877</u>	June 1988	Roberts et al.	364/408
<u>4797839</u>	January 1989	Powell	364/554
<u>4953085</u>	August 1990	Atkins	364/408
<u>5148365</u>	September 1992	Dembo	364/402
<u>5774880</u>	June 1998	Ginsberg	705/36
<u>5799287</u>	August 1998	Dembo	705/36
<u>5893079</u>	April 1999	Cwenar	705/36

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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Ron Dembo et al., Analytical Compression of Portfolios and VaR, Algorithmics Tech. Paper No. 96-01 (1997).

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ART-UNIT: 213

PRIMARY-EXAMINER: Hafiz; Tariq R.

ASSISTANT-EXAMINER: Meinecke-Diaz; Susanna

ATTY-AGENT-FIRM: Kenyon & Kenyon

ABSTRACT:

A computer-implemented method for compressing a portfolio of financial instruments is described. Financial instruments to be compressed are identified, and a compressed subportfolio corresponding to the identified financial instruments is generated. The compressed subportfolio and any non-compressed financial instruments are then combined into a compressed portfolio.

20 Claims, 7 Drawing figures

Full Title Citation Front Review Classification Date Reference Claims KOMC Draw Desc Ima

5. Document ID: US 5799287 A

L18: Entry 5 of 8

File: USPT

Aug 25, 1998

US-PAT-NO: 5799287

DOCUMENT-IDENTIFIER: US 5799287 A

TITLE: Method and apparatus for optimal portfolio replication

DATE-ISSUED: August 25, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Dembo; Ron S.</u>	<u>Toronto, Ontario</u>			<u>CA</u>

APPL-NO: 08/ 866303 [PALM]

DATE FILED: May 30, 1997

PARENT-CASE:

This is a continuation of application Ser. No. 08/248,042, filed May 24, 1994, now abandoned.

INT-CL: [06] G06 F 157/00

US-CL-ISSUED: 705/36

US-CL-CURRENT: 705/36R

FIELD-OF-SEARCH: 705/36, 705/37, 705/35, 395/925

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4346442</u>	August 1982	Musmanno	364/408
<u>4642768</u>	February 1987	Roberts	364/408
<u>4674044</u>	June 1987	Kalmus et al.	364/408
<u>4694397</u>	September 1987	Grant et al.	364/408
<u>4722055</u>	January 1988	Roberts	364/408
<u>4744026</u>	May 1988	Vanderbei	364/402
<u>4744027</u>	May 1988	Bayer et al.	364/402
<u>4744028</u>	May 1988	Karmarkar	364/402
<u>4752877</u>	June 1988	Roberts et al.	364/408
<u>4797839</u>	January 1989	Powell	364/554
<u>4953085</u>	August 1990	Atkins	364/408
<u>5101353</u>	March 1992	Lupien et al.	705/37
<u>5148365</u>	September 1992	Dembo	364/402

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Hansell, "Is the World Ready for Synthetic Equity", Institutional Investor, Aug. 1990, p. 54.

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Ring, "Wells Fargo Gets Most New Business in Dynamic Wedging", Pensions & Investment Age, Feb. 9, 1987, p. 31.

Dembo et al., "Tracking Models and the Optimal Regret Distribution in Asset Allocation", Applied Stochastic Models and Data Analysis, 1990, vol. 8, pp. 151-157.

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Torres, "Mathematician Race to Develop New Kinds of Trading Instruments", The Wall Street Journal, Oct. 18, 1991.

Stoffman, "The Hedging Hotshot of Bay street", Dec. 1990, pp. 56-59.

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Dembo et al., "Protective Basket," Options, vol. 3, No. 2, Feb. 1990, pp. 25-28.

Dembo, "The Art of the Optimum", Risk, vol. 3, No. 4, Apr. 1990, pp. 17-21.

Dembo et al., "Share the Load", Risk, vol. 4, No. 4, Apr. 1991, pp. 44-47.

Davidson, "Drawing on Data", Technology, pp. 49-53.

"The Cafe Behind the Hedge", Open Finance, Summer 1992.

ART-UNIT: 274

PRIMARY-EXAMINER: McElheny, Jr.; Donald E.

ATTY-AGENT-FIRM: Kenyon & Kenyon

ABSTRACT:

A method and apparatus for determining an optimal replicating portfolio for a given target portfolio involves an initial step wherein a user defines a target portfolio to be replicated, a set of available market instruments from which the replicating portfolio may be created, a set of future scenarios, a horizon date, and a minimum profit to be attained. A representation of the trade-off between risk and expected profit for some arbitrary replicating portfolio is then determined and used to calculate a maximum risk-adjusted profit. The maximum risk-adjusted profit reflects that level of return that may be achieved with an optimum degree of risk; that is, it reflects that point in the risk/reward trade-off where a marginal cost of risk is equivalent to a marginal benefit attainable by assuming that risk. The method then uses the predefined set of available market instruments to identify a set of transactions that will create a replicating portfolio that will achieve the maximum risk-adjusted profit. The method and apparatus also derives the information required to compute a risk premium for pricing of portfolios in incomplete markets, and performs the computation.

12 Claims, 8 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KOMC	Draw Desc	Image
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6. Document ID: US 5148365 A

L18: Entry 6 of 8

File: USPT

Sep 15, 1992

US-PAT-NO: 5148365

DOCUMENT-IDENTIFIER: US 5148365 A

TITLE: Scenario optimization

DATE-ISSUED: September 15, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Dembo; Ron S.</u>	<u>Toronto, Ontario</u>			<u>CA</u>

APPL-NO: 07/ 394081 [PALM]

DATE FILED: August 15, 1989

INT-CL: [05] G06F 15/20

US-CL-ISSUED: 364/402; 364/408

US-CL-CURRENT: 705/36R

FIELD-OF-SEARCH: 364/402, 364/401, 364/408

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4346442</u>	August 1982	Musmanno	
<u>4642768</u>	February 1987	Roberts	
<u>4674044</u>	June 1987	Kalmus et al.	
<u>4694397</u>	September 1987	Grant et al.	
<u>4722055</u>	January 1988	Roberts	
<u>4744026</u>	May 1988	Vanderbei	
<u>4744027</u>	May 1988	Bayer et al.	
<u>4744028</u>	May 1988	Karmarkar	
<u>4752877</u>	June 1988	Roberts et al.	
<u>4797839</u>	January 1989	Powell	364/554
<u>4953085</u>	August 1990	Atkins	364/408

ART-UNIT: 236

PRIMARY-EXAMINER: Smith; Jerry

ASSISTANT-EXAMINER: Trammell; Jim

ATTY-AGENT-FIRM: Spencer, Frank & Schneider

ABSTRACT:

A method and apparatus are provided for optimally allocating available resources in a physical system defined by a mathematical model having parameters of uncertain values. The method comprises the steps of firstly assigning a value to each of the uncertain parameters in the mathematical model based on a scenario that may or is expected to occur. Thereafter, given the parameter values at each possible scenario, the mathematical model is solved to yield the best solution of the mathematical model for that scenario. Once this has been complete, a probability value representing the expected probability that the scenario will occur is assigned to each scenario solution. The scenario parameter values, scenario solutions and scenario probabilities are then used to determine a single solution to the mathematical model which best "fits" the desired system behavior under the uncertainty defined by all of the scenarios considered. The single solution is then used to allocate the resources in the system. The present method is particularly useful in modelling a target portfolio from a number of other financial instruments.

18 Claims, 10 Drawing figures

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [WOOC](#) | [Draw Desc](#) | [Imag](#)

7. Document ID: WO 9854666 A1

L18: Entry 7 of 8

File: EPAB

Dec 3, 1998

PUB-NO: WO009854666A1

DOCUMENT-IDENTIFIER: WO 9854666 A1

TITLE: COMPUTER-IMPLEMENTED METHOD AND APPARATUS FOR PORTFOLIO COMPRESSION

PUBN-DATE: December 3, 1998

INVENTOR-INFORMATION:

NAME

DEMBO, RON S
 KREININ, ALEXANDER Y
 ROSEN, DAN

COUNTRY
 CA
 CA
 CA

ASSIGNEE-INFORMATION:

NAME	COUNTRY
ALGORITHMICS INC	CA
DEMBO RON S	CA
KREININ ALEXANDER Y	CA
ROSEN DAN	CA

APPL-NO: CA09800519

APPL-DATE: May 29, 1998

PRIORITY-DATA: US05092797P (May 29, 1997)

INT-CL (IPC): G06 F 17/60

EUR-CL (EPC): G06F017/60; G06F017/60

ABSTRACT:

CHG DATE=19990905 STATUS=O>A computer-implemented method for compressing a portfolio of financial instruments is described. Financial instruments to be compressed are identified, and a compressed subportfolio corresponding to the identified financial instruments is generated. The compressed subportfolio and any non-compressed financial instruments are then combined into a compressed portfolio.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) |  |  |  | [Claims](#) | [KWD](#) | [Drawn Desc](#) | [Ima](#)

8. Document ID: EP 686926 A2

L18: Entry 8 of 8

File: EPAB

Dec 13, 1995

PUB-NO: EP000686926A2

DOCUMENT-IDENTIFIER: EP 686926 A2

TITLE: Method and apparatus for optimal portfolio replication

PUBN-DATE: December 13, 1995

INVENTOR-INFORMATION:

NAME	COUNTRY
DEMBO, RON S	CA

ASSIGNEE-INFORMATION:

NAME	COUNTRY
DEMBO RON S	CA

APPL-NO: EP95303465

APPL-DATE: May 23, 1995

PRIORITY-DATA: US24804294A (May 24, 1994)

INT-CL (IPC): G06 F 17/60
EUR-CL (EPC): G06F017/60

ABSTRACT:

The disclosure relates to a method and apparatus for determining an optimal replicating portfolio for a given target portfolio involves an initial step wherein a user defines a target portfolio to be replicated, a set of available market Instruments from which the replicating portfolio may be created, a set of future scenarios, a horizon date, and a minimum profit to be attained. A representation of the trade-off between risk and expected profit for some arbitrary replicating portfolio is then determined and used to calculate a maximum risk-adjusted profit. The maximum risk-adjusted profit reflects that level of return that may be achieved with an optimum degree of risk; that is, it reflects that point in the risk/reward trade-off where a marginal cost of risk is equivalent to a marginal benefit attainable by assuming that risk. The method then uses the predefined set of available market instruments to identify a set of transactions that will create a replicating portfolio that will achieve the maximum risk-adjusted profit. The method and apparatus also derives the information required to compute a risk premium for pricing of portfolios in incomplete markets, and performs the computation. 

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Text](#) | [Image](#) | [Claims](#) | [KWMC](#) | [Draw. Desc](#) | [Clip](#)

[Clear](#) | [Generate Collection](#) | [Print](#) | [Fwd. Refs](#) | [Bkwd. Refs](#) | [Generate OACS](#)

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